CLAIMS

1. A monoclonal antibody specifically recognizing proliferative human hepatocytes.

2. The monoclonal antibody of claim 1, which is produced by hybridoma cell, Mouse-Mouse hybridoma K8223 (FERM BP-8334).

3. A hybridoma cell producing the monoclonal antibody of claim 1.

4. The hybridoma cell of claim 3, which is Mouse-Mouse hybridoma K8223 (FERM BP-8334).

5. A method for isolating proliferative human hepatocytes, which comprises isolating cells recognized by the monoclonal antibody of claim 1 or 2, from a human hepatocyte population.

6. Proliferative human hepatocytes separated by the method of claim 5.

7. A method for inducing the differentiation of the proliferative human hepatocytes of claim 6, which comprises performing at least one of the following means:

(a) spheroid culture of the proliferative human hepatocytes; and

(b) transfer of hepatic nuclear factor 4 (HNF4) gene into the proliferative human hepatocytes.

8. Functional human hepetocytes induced to differentiate by

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the method of claim 7.

9. A cell kit comprising the functional human hepatocytes of claim 8.

10. A hybrid artificial liver packed with the functional human hepatocytes of claim 9.

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